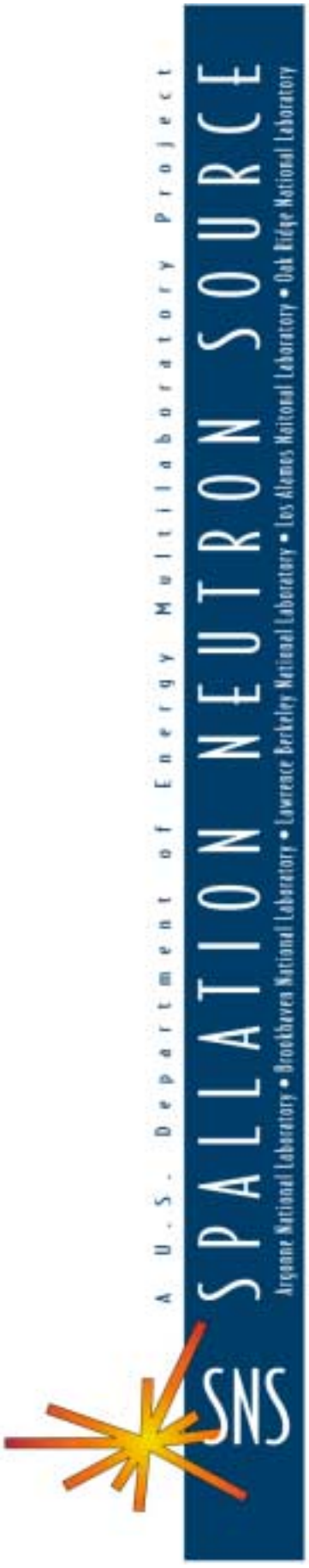
109020000-EQ0001-R00

Spallation Neutron Source

ICS Global Controls
Rack Fabrication

February, 2002



Approved by:

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Lead Engineer

REVISION RECORD				
Rev.	**Date**	**Page(s)**	**Subject**	**Approvals**
0		All	Issued approved	(see above)

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1 Scope

This work to be performed under BOA 4200000062 involves fabrication services for 13 each 19-inch racks to be used for SNS Integrated Control System global control systems. The rack names and functions are:

Table 1 – Racks to be fabricated

Bldg.	Equipment Name	Equip. Description	WBS	Fabrication Drawing
CU	CF_ICS:CUCR_Cab01	Communications cabinet	1.09.02.01.02	109020000-R8D-8000-F001
FE	FE_ICS:Cab01	Network hardware	1.09.02.01.02	109020000-R8D-8000-F008
FE	FE_ICS:Cab02	Spare	1.09.02.01.02	109020000-R8D-8000-F005
FE	FE_ICS:Cab03	Spare	1.09.02.04.02	109020000-R8D-8000-F005
FE	FE_ICS:Cab04	Spare	1.09.02.04.02	109020000-R8D-8000-F005
FE	FE_ICS:Cab05	Spare	1.09.02.04.02	109020000-R8D-8000-F005
FE	FE_ICS:Cab06	Timing system	1.09.02.04.02	109020000-R8D-8000-F009
FE	FE_ICS:Cab07	Timing system	1.09.02.04.02	109020000-R8D-8000-F009
FE	FE_MPS:Cab01	MPS Cabinet	1.09.02.03.02	109020000-R8D-8000-F009
FE	FE_MPS:Cab02	MPS Cabinet	1.09.02.03.02	109020000-R8D-8000-F009
FE	FE_MPS:Cab03	MPS Cabinet.	1.09.02.03.02	109020000-R8D-8000-F009
KL	Lin_ICS:CR2_Cab01	Comm. Cab., MPS	1.09.02.03.02	109020000-R8D-8000-F005
KL	Lin_ICS:CR2_Cab02	Comm. Cab., ICS	1.09.02.01.02	109020000-R8D-8000-F001

2 Requirements

Work to be performed is defined on the fabrication drawings listed above in Table 1. (NOTE: These fabrication drawings also list racks not in the scope of this specification). In addition to these fabrication drawings, the following detail drawings are to be used as referenced by the fabrication drawings:

109020000-R8D-8000-F002 rev 0
109020000-R8D-8000-F004 rev 0
109020000-R8D-8000-F007 rev 0

DCS shall fabricate and test the racks in accordance with the specified drawings and testing requirements supplied in this specification. All construction, installation, wiring, testing, and panel-fabricator-supplied equipment and material shall conform to the current edition of the following codes and standards.

Institute of Electrical and Electronics Engineers, Inc. (IEEE)
IEEE 118-1978 (R1992) IEEE Standard Test Code for Resistance Measurements
National Fire Protection Association (NFPA)
NFPA70 National Electric Code (NEC) 1999 Edition
National Electrical Manufacturers' Association (NEMA)
NEMA 250-1997 Racks for Electrical Equipment

2.1 Shop Drawings

None required.

2.2 Procurement

DCS shall procure all racks, panels, doors, fans, terminal strips, terminal blocks, receptacles, surge suppressors, electrical components, wiring, and mounting hardware as required per the drawings listed in section 2 above.

2.3 Installation

Component installation shall be as shown on the attached drawings. DCS is encouraged to make suggestions for changes relating to safety, efficiency or cost savings, but no deviation to the drawings is permitted without written permission from the SNS Controls group.

The following groups of racks shall be bolted together. Groups of more than 2 shall be broken down into rack pairs (plus a single rack if an odd number) for shipping. Racks shall be shipped with the hardware required to bolt them back together.

Group #1:
FE_ICS:Cab01
FE_ICS:Cab02
FE_ICS:Cab03
FE_ICS:Cab04
FE_ICS:Cab05

Group #2:
FE_ICS:Cab06
FE_ICS:Cab07

Group #3:
FE_MPS:Cab02
FE_MPS:Cab03

Group #4:

Lin_ICS:CR2_Cab01
Lin_ICS:CR2_Cab02
(NOTE: For these two cabinets it will be necessary to drill through a side panel. The side panel is required to secure the contents of the first cabinet).

2.4 Wiring

Wire as indicated in the specified drawings.

2.5 Painting

DCS shall touch-up all cabinets prior to shipment to SNS.

2.6 Bar Coding and Tagging

DCS shall provide engraved nameplates for each of the equipment racks as indicated on the specified drawings. No bar coding is required.

3 Government Furnished Equipment

None.

4 Delivery

Finished products are to be delivered to the SNS RATS building. The shipping documents shall reference the associated task order number.

Spallation Neutron Source
RATS Building
115 Union Valley Road
Oak Ridge, TN 37830

Delivery of all racks shall occur within 60 days of Task Order Release.

5 Quality Assurance

5.1 Documentation

DCS shall provide the following documentation:

- Marked up drawings for as-builts
- Test reports

5.2 Testing

After fabrication, all wiring and racks will be tested prior to shipment to SNS. DCS shall notify SNS at least one week prior to the start of any testing activity. SNS may send a representative to witness all tests. SNS must approve all test results prior to shipment. DCS shall perform and document the following tests:

- Electrical continuity check of each wire
- Verify operation of ventilation fans
- Verify operation of all rack doors and locks